



The Innovation of Disaster Prevention Education in Chinese Universities

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Abstract. There are relatively few practical courses of disaster prevention education in Chinese colleges and universities. Most of the disaster prevention education just stays at the theoretical level. Therefore, college teachers and students' awareness of disaster prevention is weak, and once they encounter practical problems, their disaster prevention skills are insufficient. Therefore, it is necessary to reform the teaching methods of disaster prevention education and build practical courses of disaster prevention, such as setting up disaster prevention virtual drill courses, implementing teacher training and so on, so as to strengthen the disaster prevention general education of college teachers and students and improve their ability to deal with emergencies and disasters.

Keywords: University · Disaster prevention education · Practical courses · Innovation

1 Introduction

Although school disaster prevention education is of great significance to improve people's awareness and ability of disaster prevention and reduction, the proportion of disaster prevention education activities in China's school education system at all levels is low, which has not been recognized and fully implemented.

Article 30 of the emergency response law of the People's Republic of China stipulates that school at all levels and types shall incorporate emergency knowledge education into their teaching contents, carry out emergency knowledge education for students, and cultivate students' safety awareness and self-rescue and mutual rescue ability. In order to improve the safety awareness and emergency response ability of the whole society, it is necessary to carry out emergency knowledge education for students in the school education stage. Colleges and universities shall, according to the characteristics of disciplines and majors, educate students about emergency prevention and emergency rescue. Covid-19 prevention and control practice also tells that it is imperative to explore the disaster prevention education mode in domestic universities.

Japan's disaster prevention education methods are flexible and diverse, step by step, teaching in fun, emphasizing refinement of content and highlighting real experience. It has formed a set of effective disaster prevention and asylum education system, which is worthy of reference.

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A. Volodin and I. Roumbal (Eds.): ICECIDT 2022, ASEHR 677, pp. 435–441, 2023.

https://doi.org/10.2991/978-2-494069-02-2_48

2 Disaster Prevention Education in China

China has always attached great importance to disaster prevention and reduction according to law, formulating a series of laws and regulations related to disaster prevention and reduction, and the legal system of disaster prevention and reduction has been continuously improved.

Article 26 of China's constitution provides for the prevention and control of disasters in principle. On this basis, China's laws and regulations on disaster prevention and reduction mainly include: Emergency Response Law, Environmental Protection Law, Meteorological Law, Earthquake Prevention and Reduction Law, Fire Control Law, Flood Control Law, Forest Law, Water and Soil Conservation Law, and the Regulations on Prevention and Control of Geological Disasters, Flood Control Regulations, Drought Resistance Regulations, Forest Fire Prevention Regulations of the State Council Regulations on Post Wenchuan Earthquake Recovery and Reconstruction and other laws and regulations. In addition, many local regulations and departmental rules have also made relevant provisions on disaster prevention and reduction.

In 1989, the United Nations Economic and Social Council designated the second Wednesday in October as the "international day for disaster reduction", which aims to arouse the attention of the international community to disaster prevention and reduction and urge governments to include natural disaster reduction in economic and social development plans.

May 12, 2014 is the 13th National Disaster Prevention and Reduction Day, and May 8–14 is the disaster prevention and reduction publicity week, with the theme of "preventing and resolving disaster risks and building a solid foundation for safe development". The office of the National Disaster Reduction Commission and the Emergency Management Department previously issued a notice to deploy the activities of the national disaster prevention and reduction day [1].

Various regions and departments have organized various thematic activities. The national disaster reduction office and the emergency management department produced 80,000 publicity wall charts and 12,000 manuals and distributed them to all localities. Beijing adopts the mode of "offline activity experience + online broadcasting + education" to organize primary and secondary school students in the city to carry out the theme activity of "safe growth and dedication to the party" for disaster prevention and reduction. Shanxi Province carried out the activity of "expert technical services into the community", and equipped some comprehensive disaster reduction demonstration communities with automatic external defibrillators. Zhejiang Province launched the trial sounding of "5.12" air defense and disaster prevention alarm [2].

All regions and departments have extensively mobilized the public to participate. Shanghai, Jiangsu, Zhejiang and Anhui jointly held the Yangtze River Delta disaster prevention and reduction publicity week and the first Yangtze River Delta International Emergency Disaster Reduction and rescue Expo, attracting more than 70,000 people to the scene. Guangxi, Shaanxi, Gansu, Ningxia and other places have opened fire museums, earthquake prevention and disaster reduction popular science education bases and other facilities and places to the public, and set up special areas to carry out public experience activities of disaster prevention and disaster reduction. Beijing, Sichuan, Hubei, Shanxi and other places organized publicity activities for disaster prevention and reduction into

campuses, enterprises, communities, rural areas and families. Guangdong Province has the same “online disaster prevention and reduction education course” for primary and secondary school students and parents in the province.

3 Innovation of Disaster Prevention Education in Colleges and Universities

Colleges and universities are one of the areas with relatively concentrated personnel. When an emergency or disaster occurs, it is very important to ensure the personal safety of teachers and students on campus to the greatest extent. In recent years, many colleges and universities in China have incorporated general education in disaster prevention and mitigation into undergraduate courses, so as to enable students to correctly understand the types and scale of disasters and the serious consequences caused by disasters, which is of great significance [3, 4].

However, from the perspective of disaster prevention education courses started by major colleges and universities, most of them just stay at the level of theoretical knowledge, and few colleges and universities can really start practical courses. How to make college students fully understand the relevant knowledge of disaster prevention before entering the society is not only to spread and popularize knowledge to the public and improve college students’ disaster awareness, but also to improve college students’ practical ability to deal with and prevent disasters through a series of practical courses and Simulation of emergencies or disaster scenes.

The National Disaster Prevention and Reduction Day was established with the approval of the State Council of the People’s Republic of China. Since 2009, May 12 is the national day for disaster prevention and reduction every year. Only on this day will many colleges and universities offer practical lectures on disaster prevention education or carry out theme education on disaster prevention and safety. In the past two years, due to the COVID-19, some universities have also set up and carried out a series of activities on the National Day for Disaster Prevention and Reduction Online.

For example, on May 12, 2020, the 12th National Disaster Prevention and Reduction Day in China, Sichuan University held an online lecture on the theme of “improving grass-roots emergency response capacity and building a people’s line of defense for disaster prevention, reduction and relief”. In order to further improve the knowledge and skills of disaster prevention and reduction among college teachers and students, a series of activities of 2020 National Disaster Prevention and Reduction Day were carried out online in the safety emergency skills training center of Sichuan University.

In fact, from the perspective of “all kinds of disasters”, they are not just natural disasters. From the perspective of “big emergency”, disaster preparedness is not only the preparation of some emergency materials at home, but also a series of preparations such as risk investigation and evaluation, mechanism construction, plan formulation, emergency drill, material reserve, equipment and communication guarantee, education and training, social mobilization and so on.

However, many disaster prevention courses in colleges and universities are lack of practicality, and the construction of network courses is not perfect. Only through the innovation of disaster prevention and reduction courses, can we further strengthen

the awareness of disaster prevention, reduction and relief of teachers and students and improve the comprehensive prevention ability of teachers and students against disasters, so as to build a strong security defense line on campus.

In terms of disaster prevention education, the Japanese government has established a disaster prevention education system suitable for students of all grades. Through disaster prevention education and disaster prevention practice courses, students can master disaster prevention awareness, understand disaster culture, build a safe society and cultivate their ability to solve problems.

4 Case Study of Disaster Prevention Education in Japan

On March 11, 2011, a strong earthquake occurred in the sea area of East Japan and triggered a tsunami. The degree of damage and threat shocked the world. But what is more shocking to the world is that in the face of the sudden disaster, the Japanese people are not afraid of the “earthquake”, showing unimaginable life tolerance and calm human nature, rich self-help experience and efficient disaster resistance. In fact, these are the comprehensive reflection of the cumulative indicators that Japanese schools have always paid attention to disaster prevention and safety education [6].

In Japan, disaster prevention education, as the core course of citizen safety education, is popular among teenagers, young people, middle-aged people, elderly people and other people. Japanese children must receive traffic safety education from an early age, and traffic safety knowledge has been incorporated into the basic curriculum. The Ministry of Education, Culture, Science and Technology of Japan has formulated the implementation plan of school traffic safety education, and carried out “traffic safety slogan competition”, “opening traffic safety teahouse” and “making traffic safety map” [5].

The Japanese government and society attach great importance to disaster prevention and safety education for primary and secondary school students, and have issued a series of laws and regulations to regulate and guide students to carry out disaster prevention and safety education. Laws on disaster prevention and safety education in schools mainly include the basic law on education, the disaster response law and the school health and safety law. In addition to the above laws, there are also provisions on national disaster prevention and safety education, including primary and secondary school students, in the special laws and regulations on natural disasters such as earthquakes, typhoons, storms (snow) and other accidents.

The Learning Guidance Essentials (Syllabus) of primary and secondary schools in Japan have clear requirements for disaster prevention and safety education for primary and secondary students. Although there is no special course for disaster prevention and safety education in Japan, the relevant contents of disaster prevention and safety education are organically integrated into other courses, especially in the course of “comprehensive learning time”. In the course of disaster prevention and safety education for students, students are required to understand the importance of emergency management and learn to save themselves and others. In health physical education classes in junior and senior high schools, students should be guided on emergency measures such as hemostasis, bandage and cardiac resuscitation [7].

Tokyo has conducted beneficial practice and exploration in guiding schools and students to carry out safety education. In 2006, the Tokyo Metropolitan Education Commission issued safety education guidelines to students in the metropolitan area, mainly including safety education objectives, safety education promotion strategies, safety management and accident response strategies. In addition, it also makes detailed provisions and provides effective guidance on how to infiltrate safety education into disciplines at all stages of primary and secondary schools, as well as how to carry out safety education in special activities and comprehensive learning time. The Tokyo Metropolitan Education Commission promotes safety education in the following three areas in metropolitan schools: life safety education, traffic safety education and disaster safety education. Strengthen teachers' "schedule safety guidance", "regular safety guidance" and "safety guidance under special circumstances".

Practical courses of disaster prevention education are also carried out in primary and secondary schools in Japan every month. For example, the Easi lab project of Waseda University Waseda Social Innovation Research Association (wsic) and the community epidemic prevention mutual aid network (can program) jointly launched a series of disaster prevention education in Japan. In daily life, school teachers and students maintain their attention and imagination to disasters ("Fig. 1").

In a disaster, the ability to protect oneself and help others is an important part of disaster prevention education. However, traditional exercises and training are somewhat boring for students. The disaster prevention experience projects in the activities not only pay attention to interest, but also have practicability. All disaster prevention projects are designed based on interviews with people who experienced the Hanshin earthquake in 1995. The experience projects in the activities are life-saving skills in the event of a disaster.

For example, in the fire extinguisher experience project, students will experience the necessary operations in case of fire, from shouting for help to operating the fire extinguisher aiming. The water gun that imitates the real fire extinguisher used in the project is also to train the students' aiming technology in real fire. Therefore, when repeating the challenge game, the students unconsciously have the ability to deal with the fire.



Fig. 1. Practical courses of disaster prevention in Japanese schools [6].

5 Conclusion

For saving lives, the emergency response ability and theoretical knowledge of disaster prevention are very important. Such knowledge must be mastered and prepared on weekdays in order to be useful when a disaster comes. However, the disaster prevention education in Chinese colleges and universities is still lack of practical application. Therefore, it is necessary to learn the practical courses of Japanese primary and secondary schools to improve the ability of college teachers and students to deal with emergencies and disasters.

Japan's disaster prevention education methods are flexible and diverse, step by step, teaching in fun, emphasizing refinement of content and highlighting real experience, forming a set of effective disaster prevention and asylum education system. How to train Chinese college students to learn self rescue and other rescue skills in practical exercises requires the construction of a series of practical courses.

Authors' Contributions. This paper is independently completed by Fei Zhou.

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